

FIGURE 1

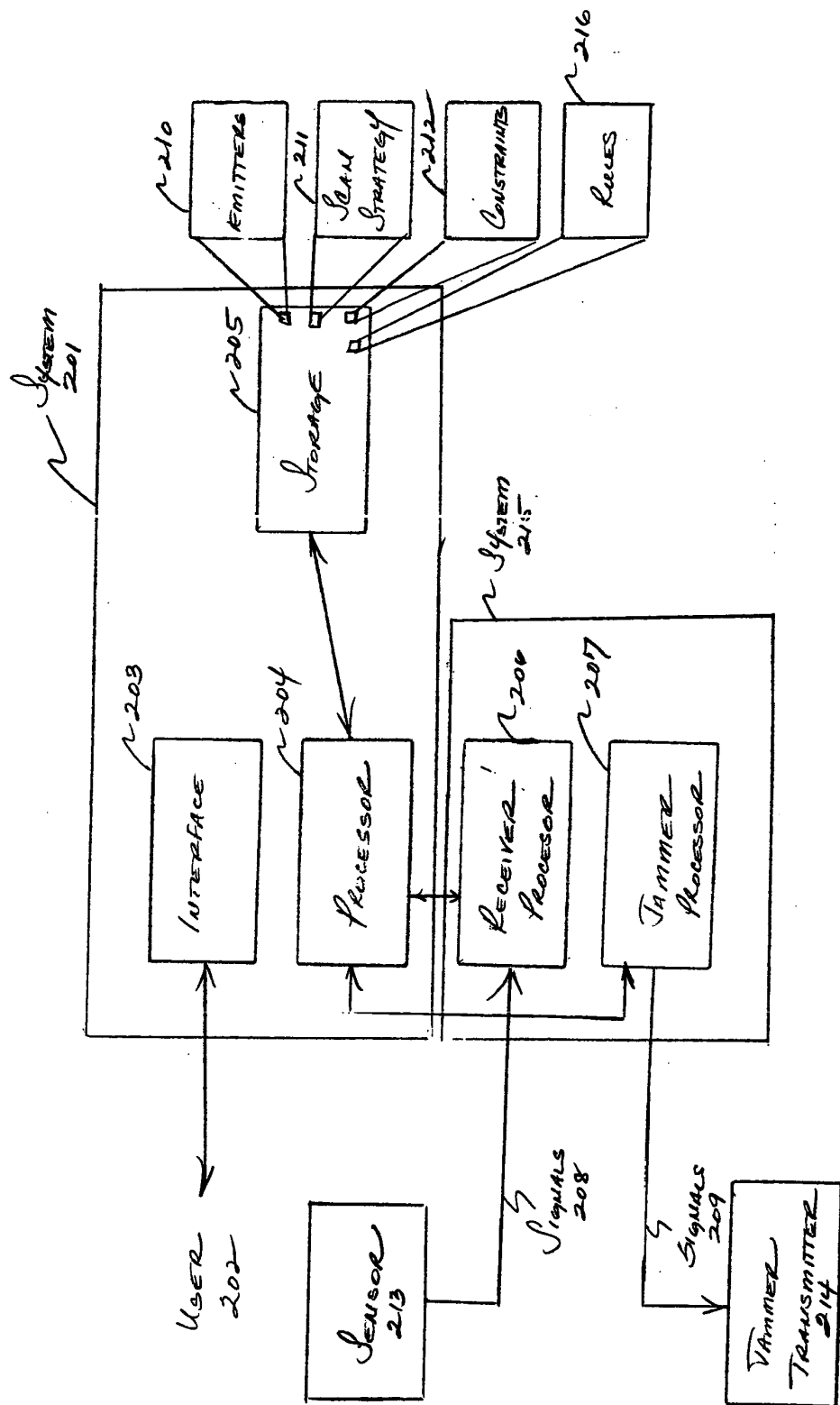
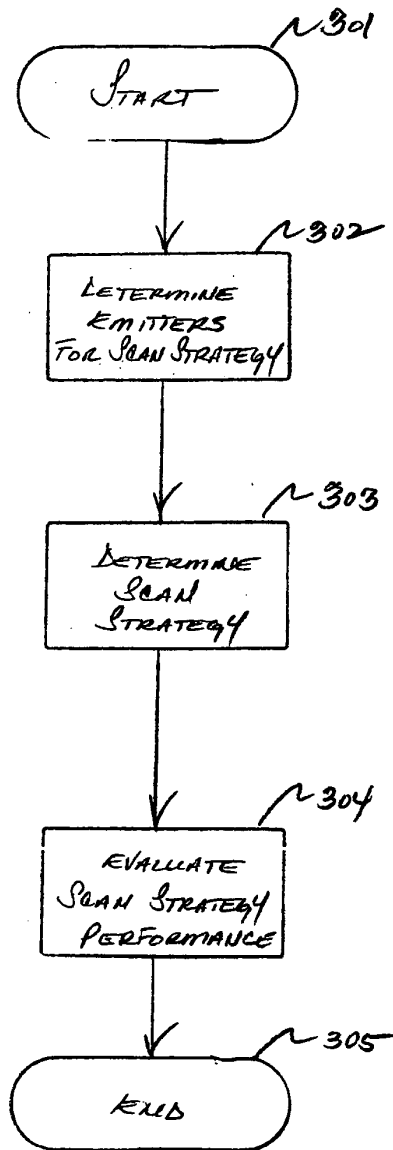


Figure 2



PROCESS
300

FIGURE 3

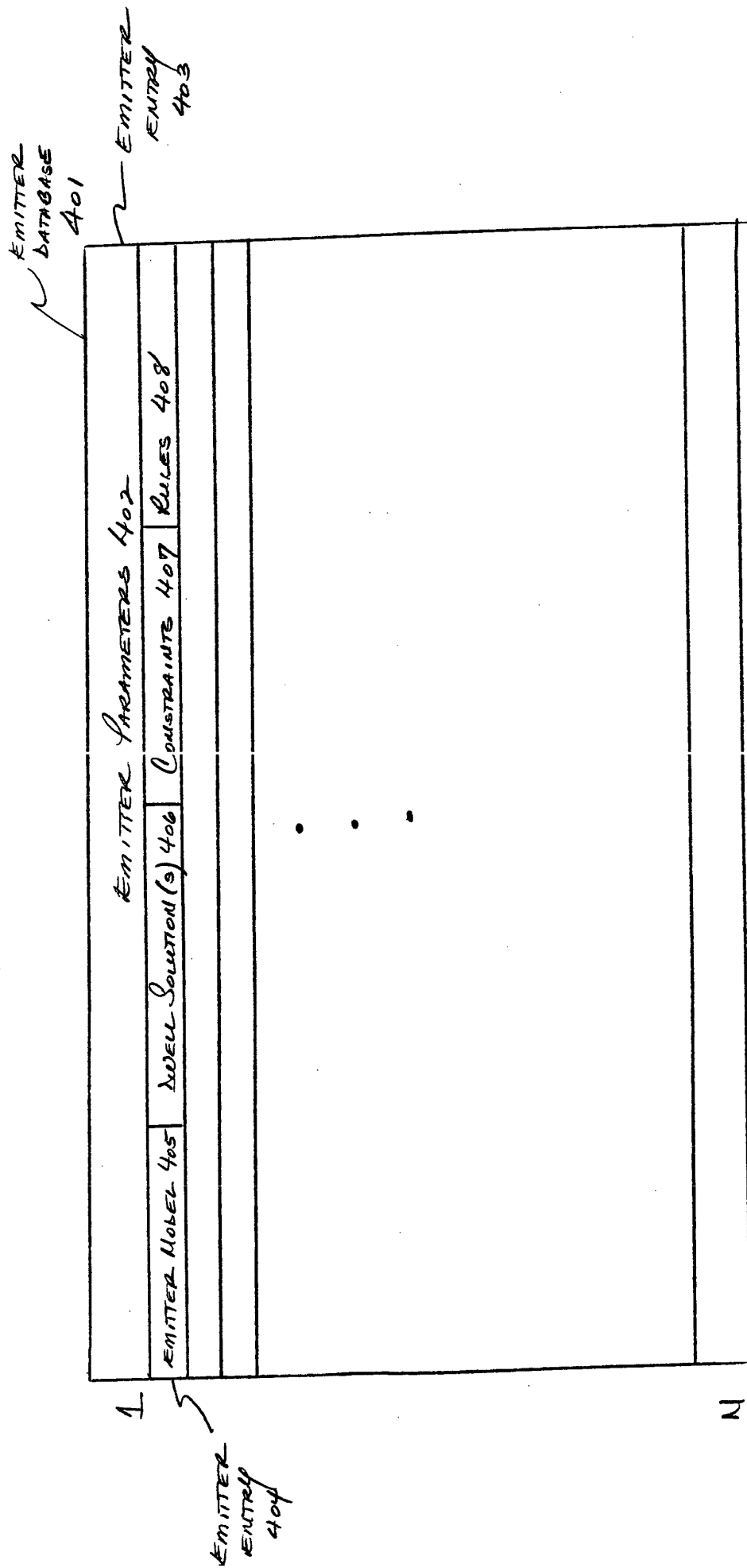


Figure 4

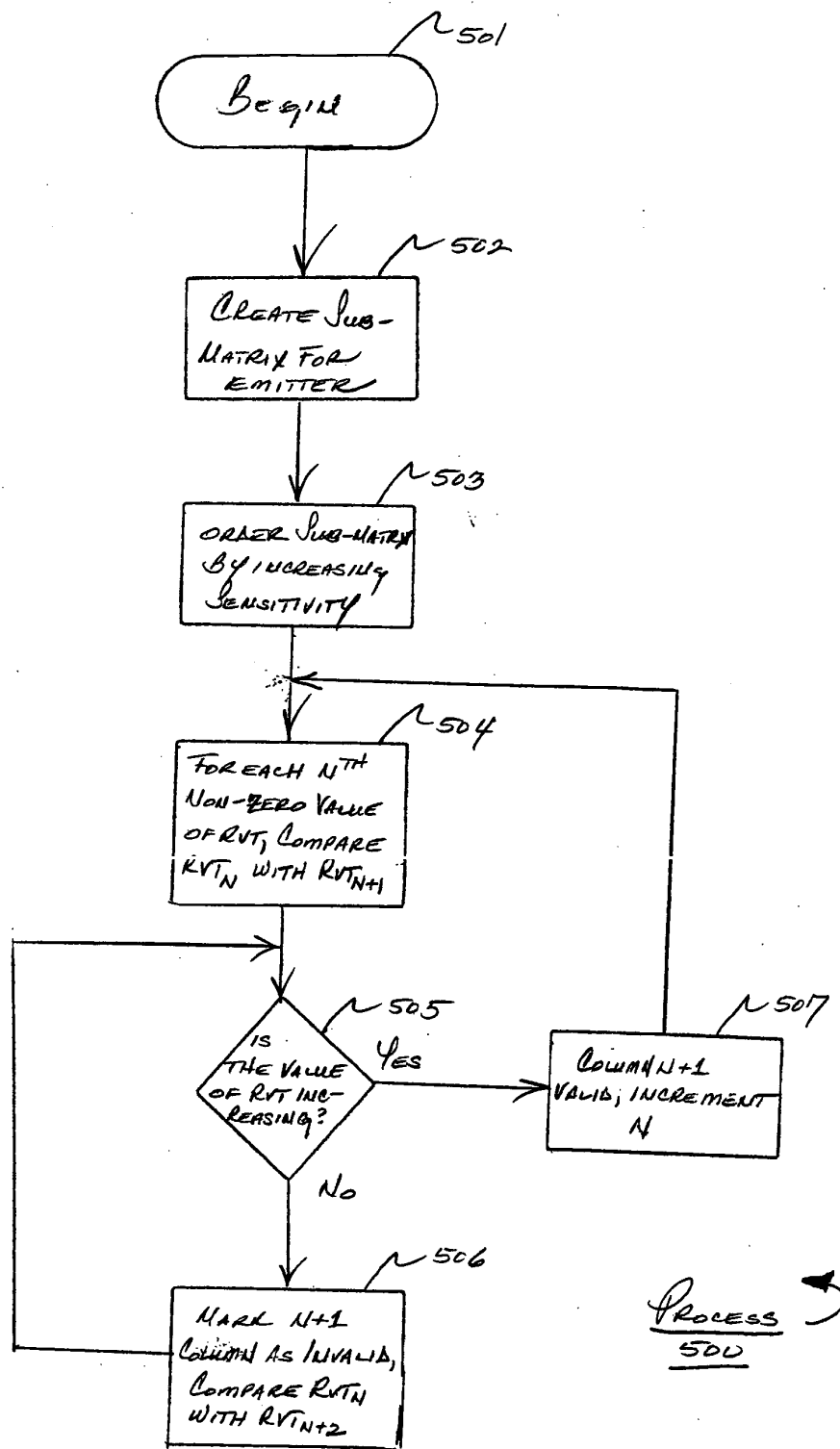


FIGURE 5

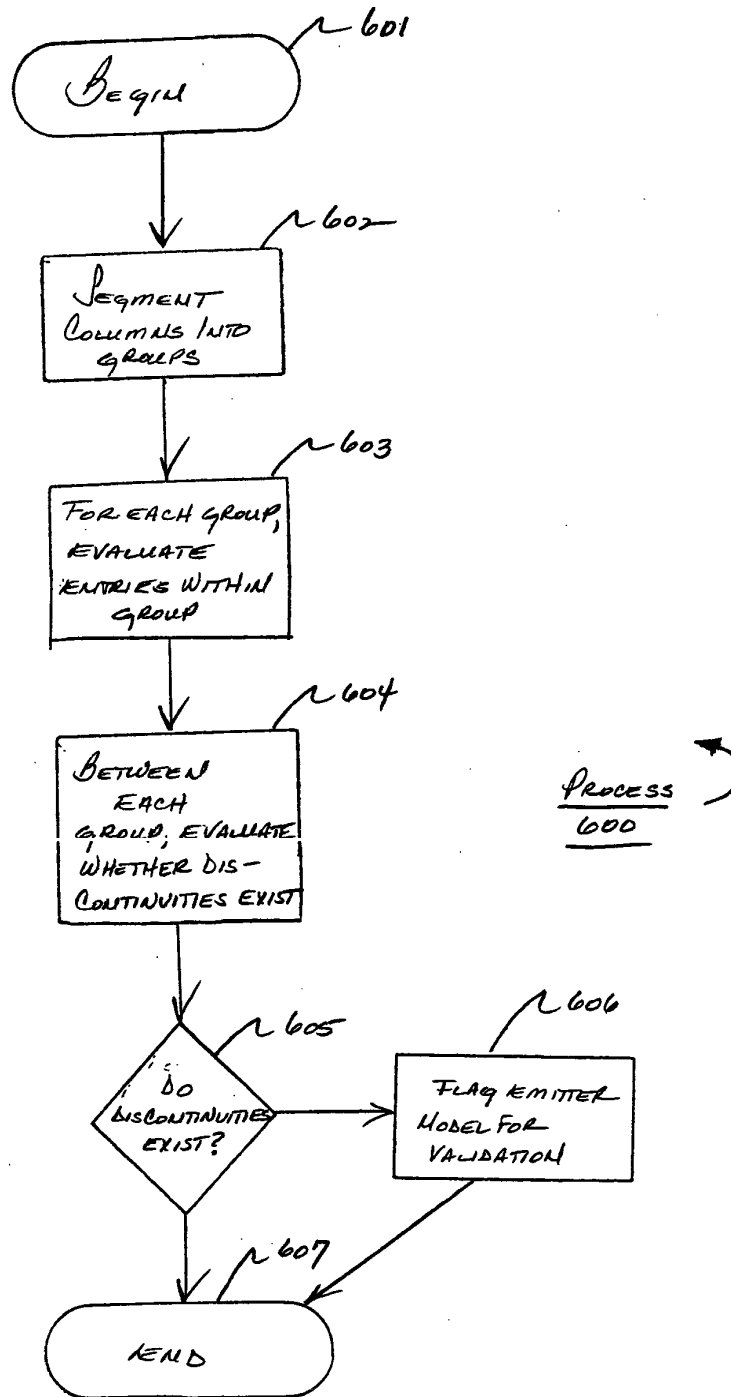


FIGURE 6

Figure 8A

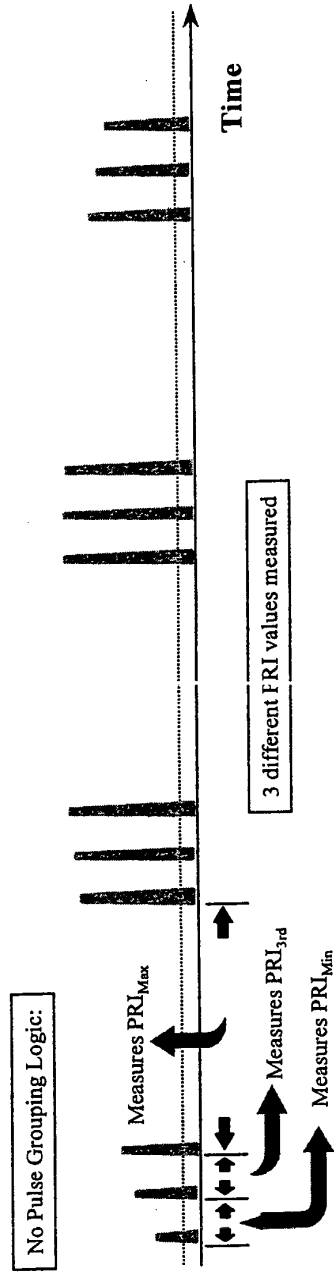
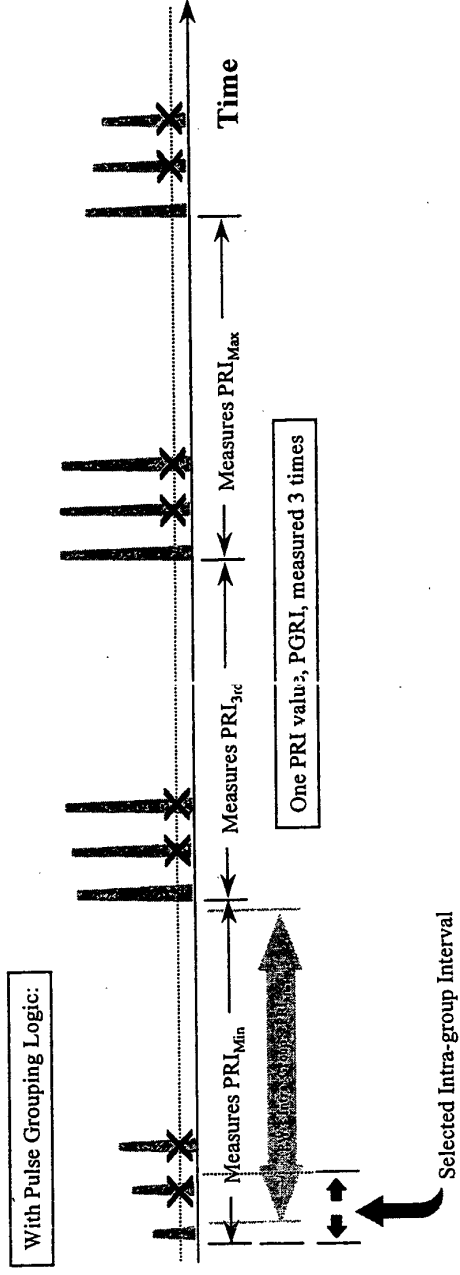


Figure 8B



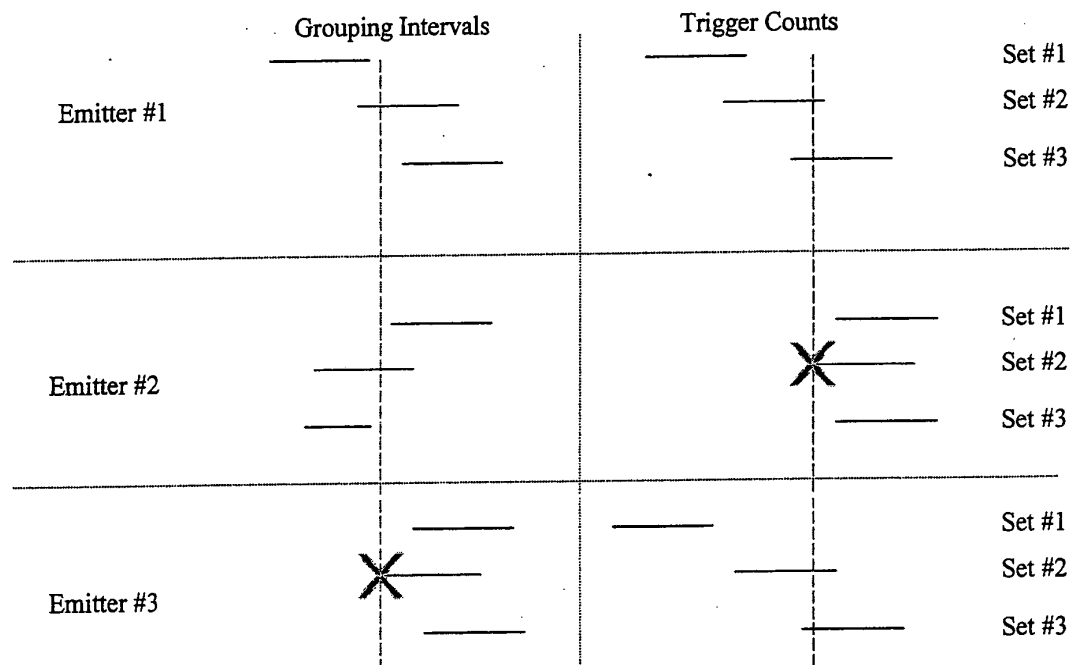
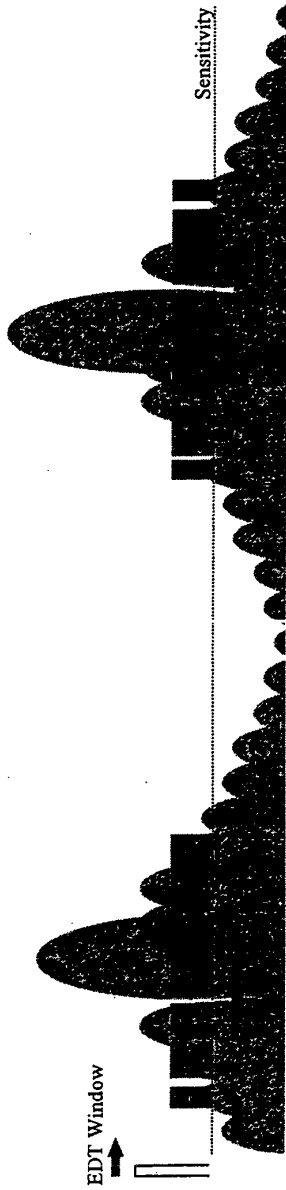


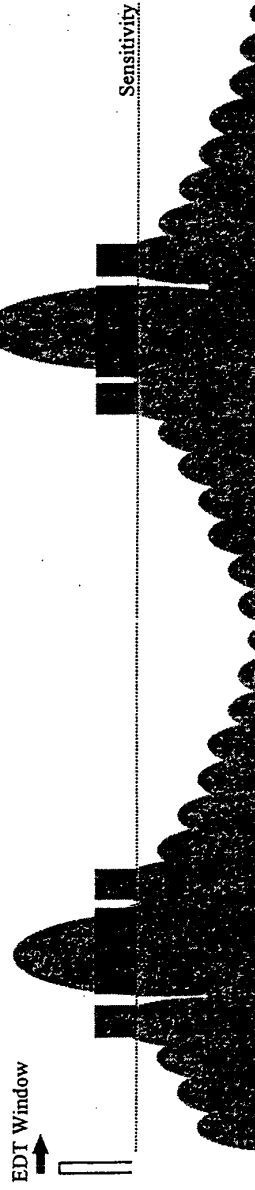
FIGURE 9

Figure 10A



Discrete Illuminations (TIBS)

Figure 10B



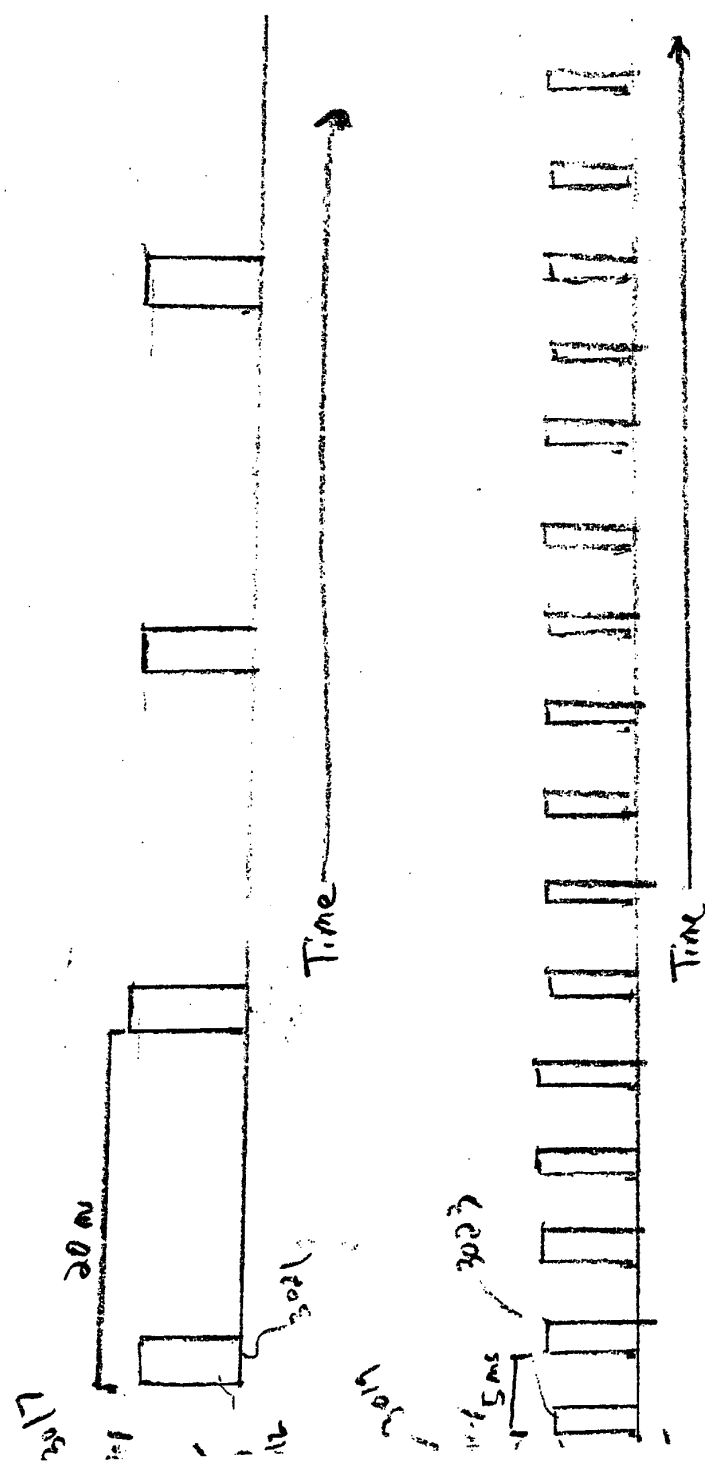
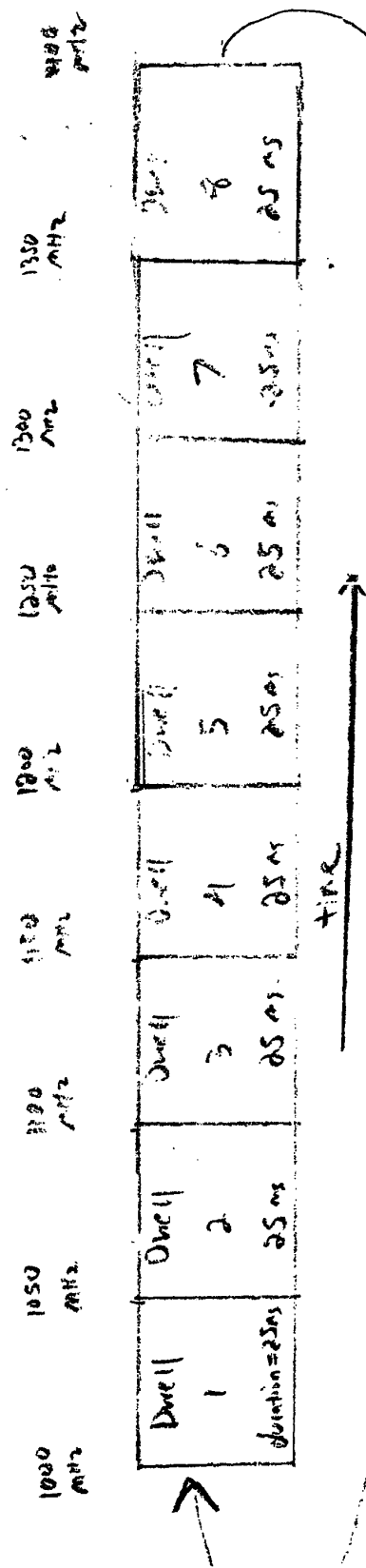
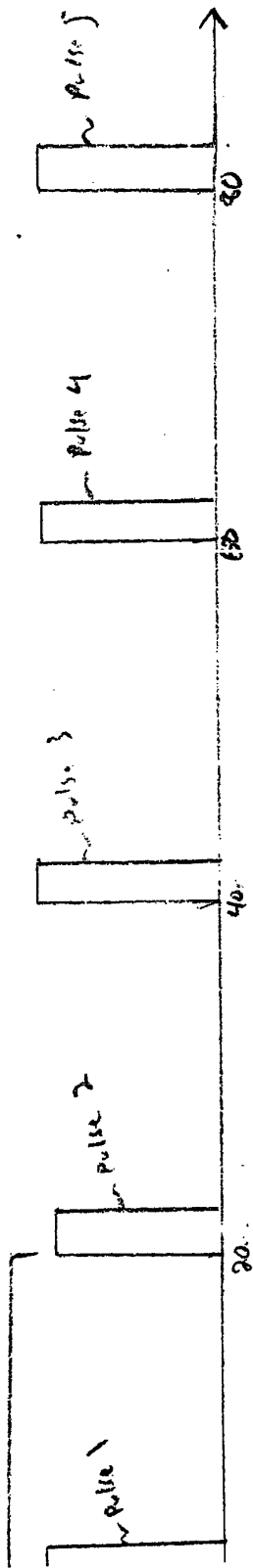


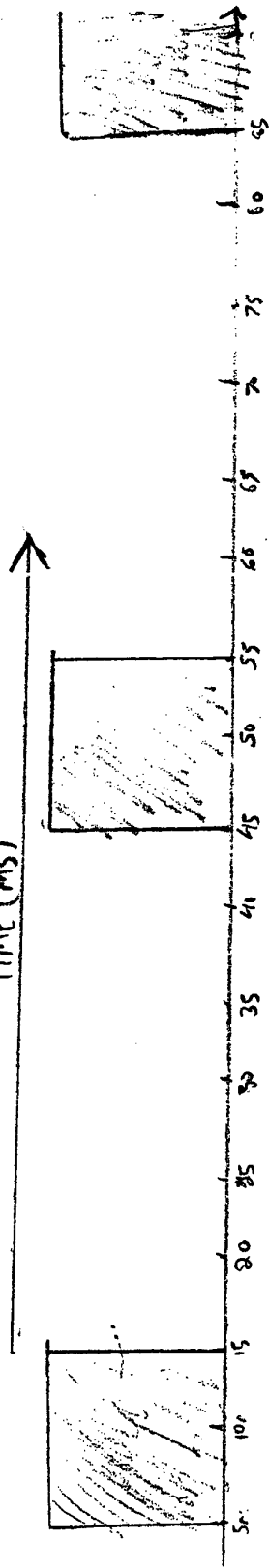
Figure 11

PRI = 20ms



Emitter 3101

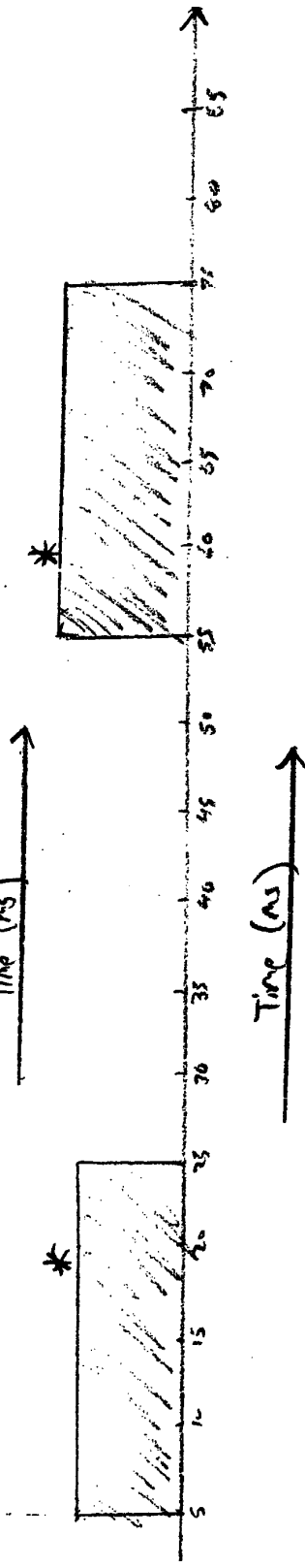
Time (ms)



Solution 1

Dwell Duration = 12ms
Revisit Time = 40ms

Time (ms)



Solution 2

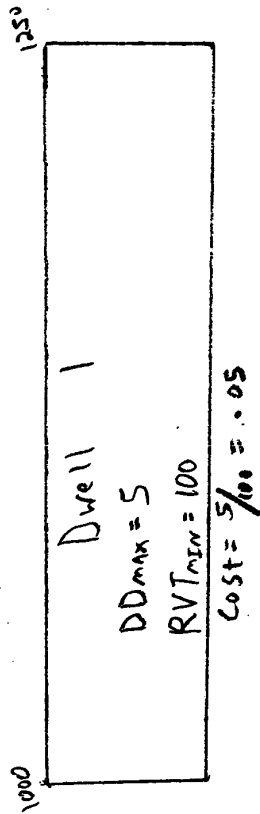
Dwell Duration = 20ms
Revisit Time = 50ms

Figure 12

4000

| Emitter Name | Driving Amp 250 mV _{rms} IF 15 mV _{rms} VDD | Driving Amp 30 mV _{rms} IF 15 mV _{rms} VDD | RF Min (MHz) | RF Max (MHz) | Min MDT (ms) |
|--------------|---------------------------------------------------------------------|--------------------------------------------------------------------|--------------|--------------|--------------|
| E1 | 100 ns | 650 ns | 1000 | 1300 | 3 |
| E2 | 120 ns | 780 ns | 1220 | 1350 | 5 |
| E3 | 110 ns | 330 ns | 1510 | 1810 | 2 |
| E4 | 130 ns | 390 ns | 1730 | 1860 | 4 |

Figure B



Solution 1

| | 1030 | 1060 | 1090 | 1120 | 1150 | 1180 | 1210 | 1240 | 1270 |
|--------------------|---------|---------|---------|---------|---------|---------|---------|---------|------|
| Dwell 1 | Dwell 2 | Dwell 3 | Dwell 4 | Dwell 5 | Dwell 6 | Dwell 7 | Dwell 8 | Dwell 9 | |
| DD _{max} | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | |
| RVT _{min} | 650 | 650 | 650 | 650 | 650 | 650 | 650 | 650 | |
| Cost | 3/650 | 3/650 | 3/650 | 3/650 | 3/650 | 3/650 | 5/650 | 5/650 | |

Solution 2

Total
Cost

31/650 ≈ 0.048

Figure 14A

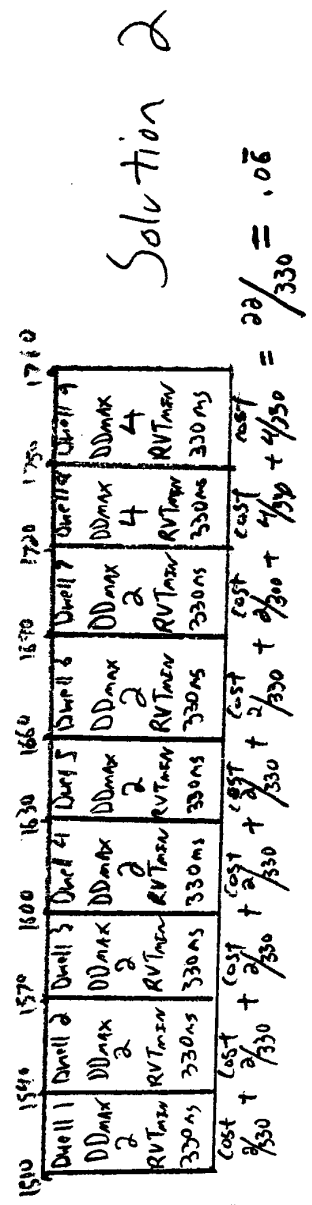
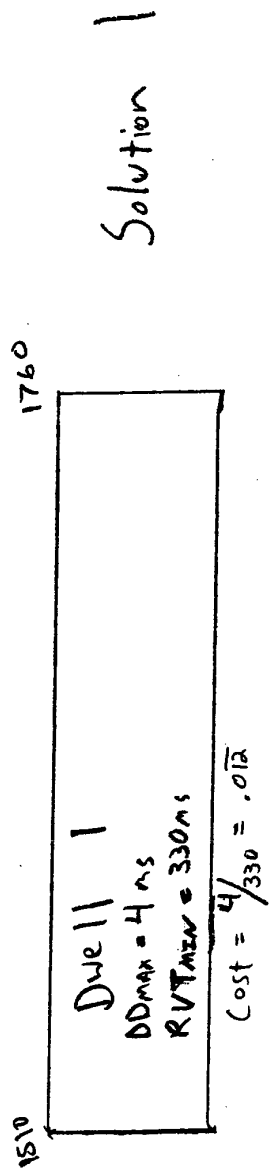


Figure 14B

Figure 15

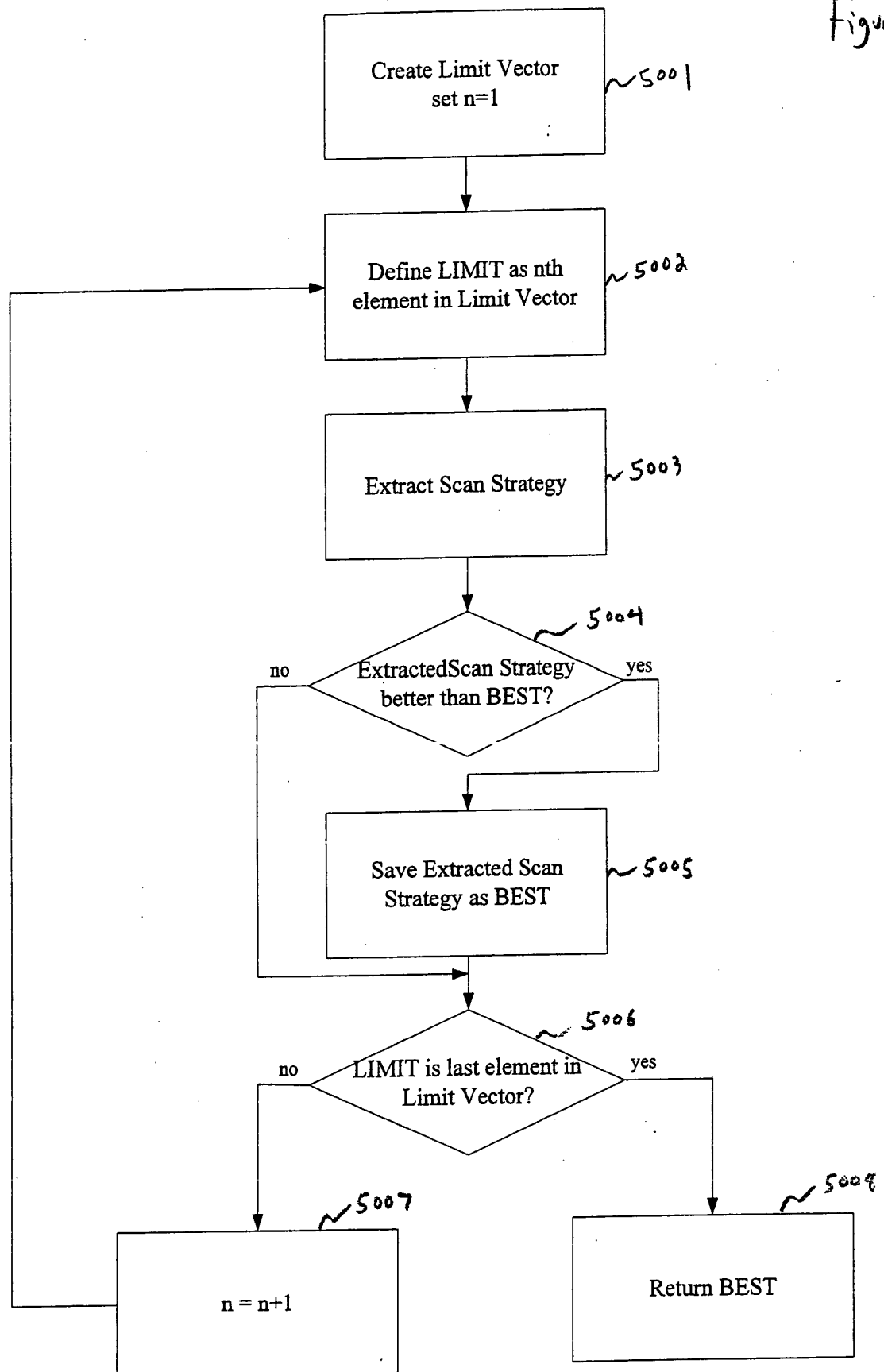
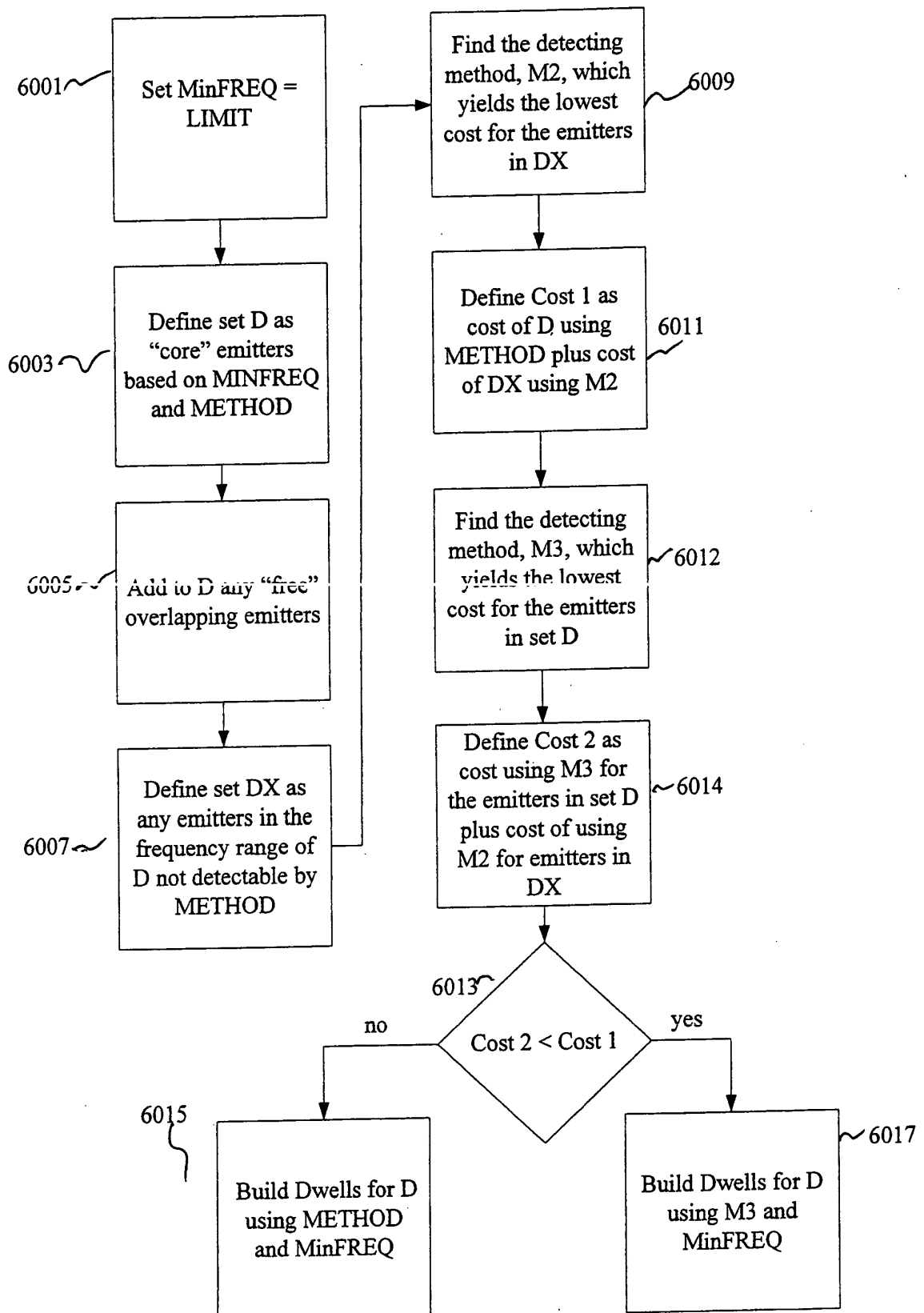


Figure 16



| Name | RF Min | RF Max |
|------|--------|--------|
| E1 | 1100 | 1200 |
| E2 | 1150 | 1250 |

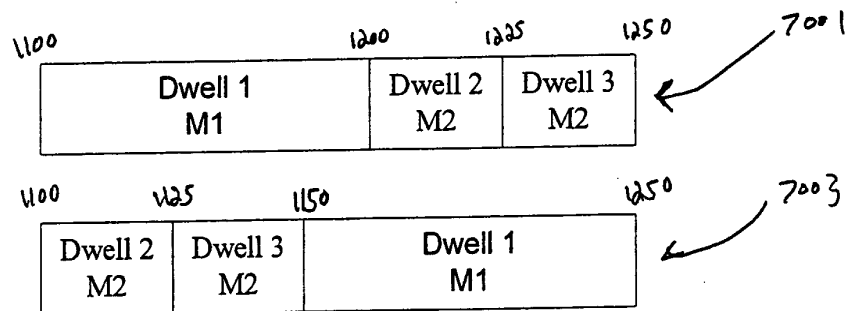
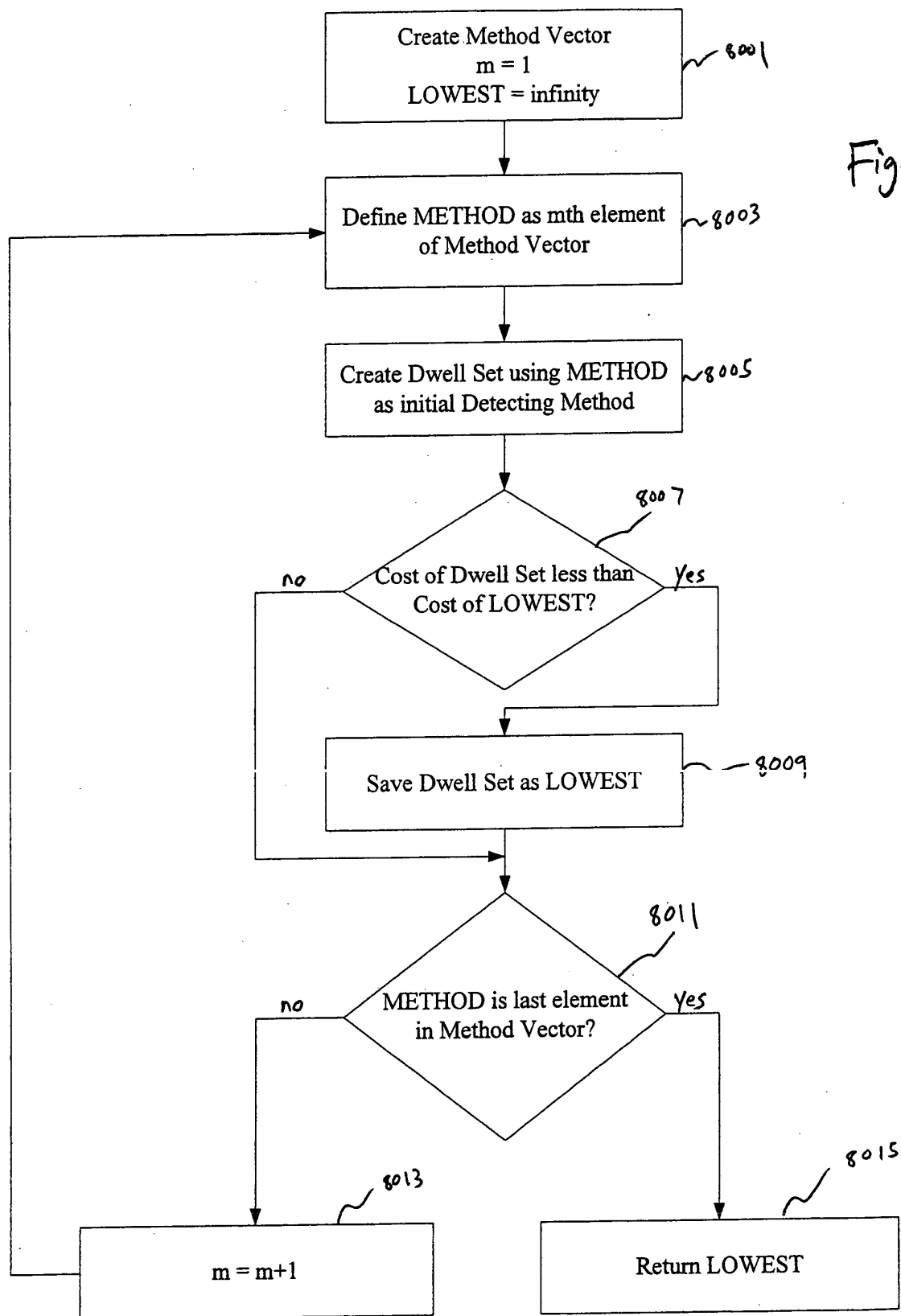


Figure 17

Figure 18



| Emitter | Dwell Duration (ms) | Revisit Time (ms) |
|-----------|---------------------|-------------------|
| Emitter 1 | 1 | 500 |
| Emitter 2 | 2 | 1200 |

Figure 19

| Emitter | Dwell Duration (ms) | Revisit Time (ms) | Cost |
|-----------|---------------------|-------------------|------|
| Emitter 1 | 1 | 500 | .002 |
| Emitter 2 | 5 | 1000 | .005 |

Figure 20

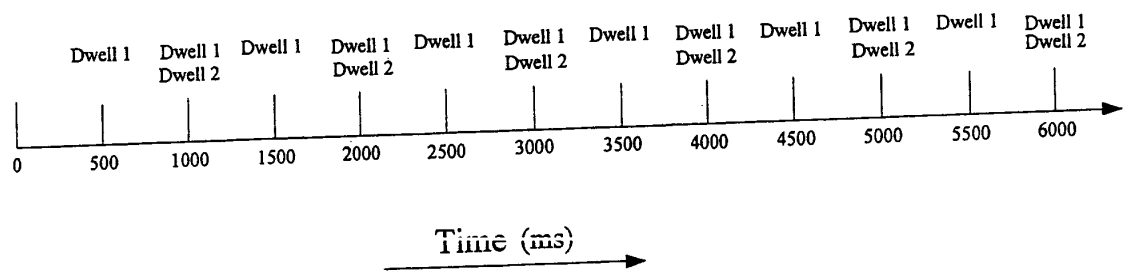


Figure 21

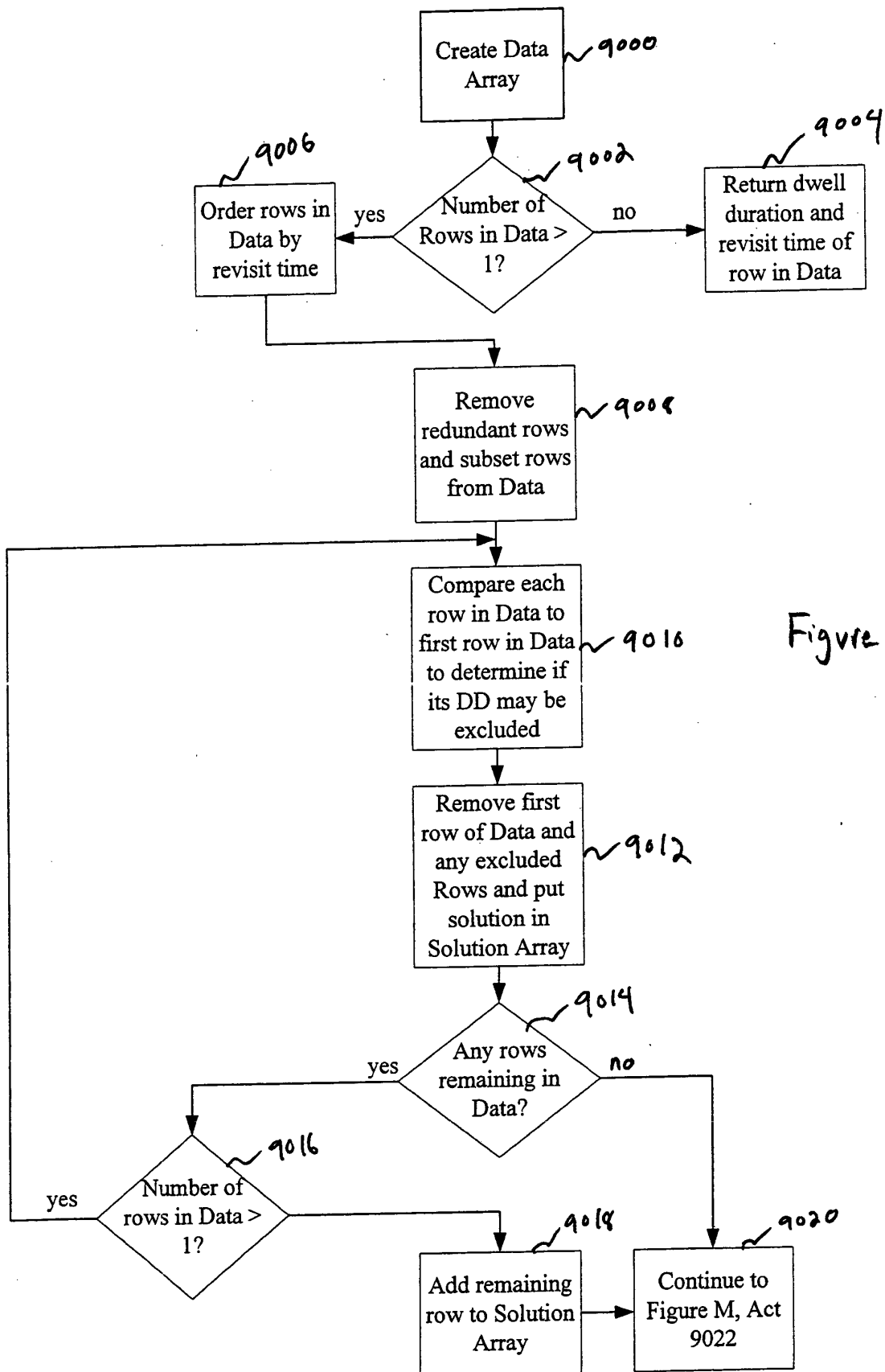


Figure 22

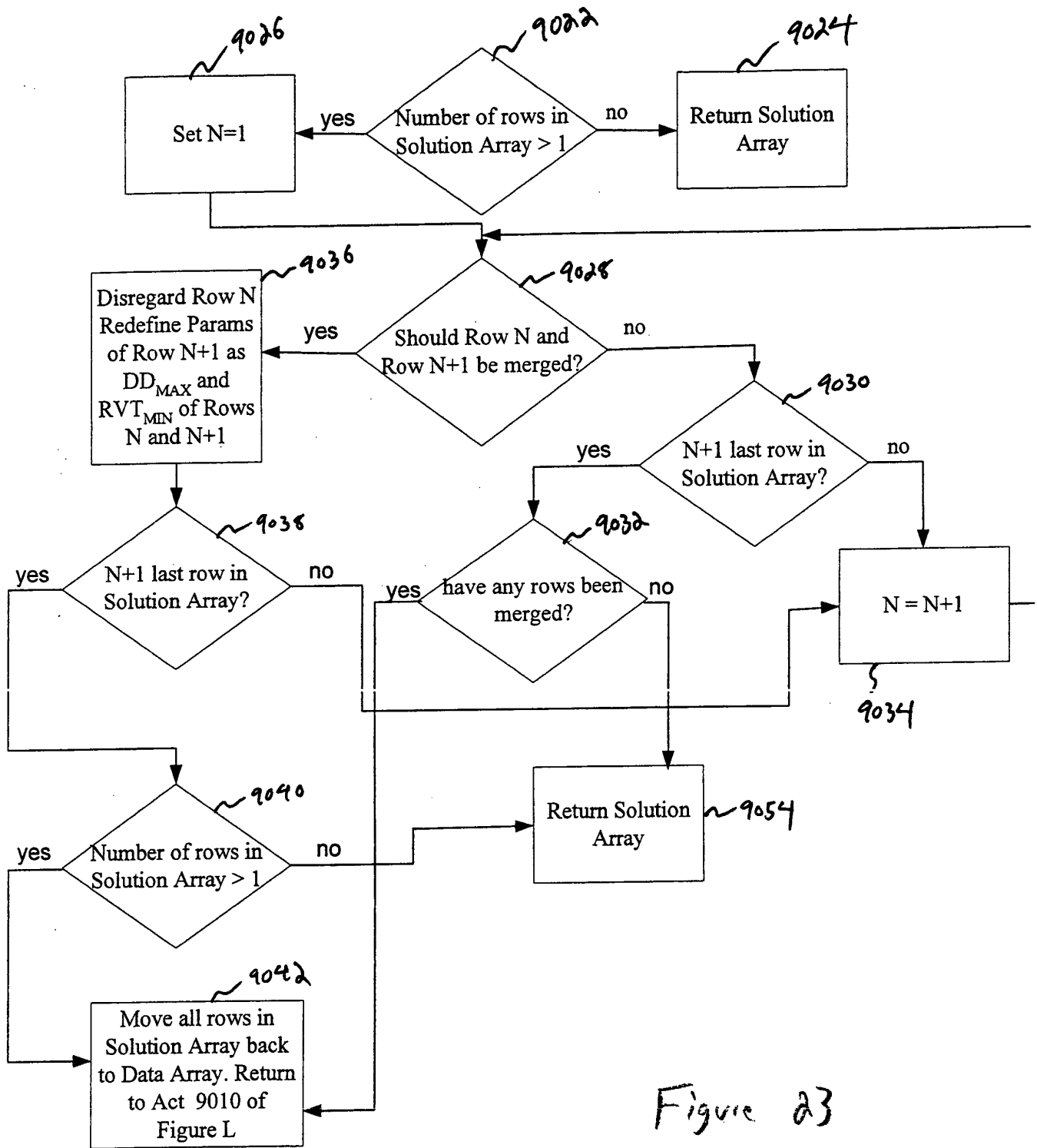


Figure 23

9044

| Data | | |
|------|-----|------|
| MDT | EDT | RVT |
| 3.05 | 17 | 2868 |
| 3 | 19 | 2000 |
| 3 | 19 | 2000 |
| 1 | 7 | 500 |
| 2 | 9 | 700 |
| 2.3 | 11 | 800 |
| 0.5 | 3.5 | 1000 |

Figure 24A

9044

| Data | | |
|------|-----|------|
| MDT | EDT | RVT |
| 1 | 7 | 500 |
| 2 | 9 | 700 |
| 2.3 | 11 | 800 |
| 0.5 | 3.5 | 1000 |
| 3 | 19 | 2000 |
| 3 | 19 | 2000 |
| 3.05 | 17 | 2868 |

9048
9049
9050

Figure 24B

9051
9052

| Data | | |
|------|-----|------|
| MDT | EDT | RVT |
| 1 | 7 | 500 |
| 2 | 9 | 700 |
| 2.3 | 11 | 800 |
| 3 | 19 | 2000 |
| 3.05 | 17 | 2868 |

Figure 24C

9044

| Data | | |
|------|-----|-----|
| MDT | EDT | RVT |
| 2 | 9 | 700 |
| 2.3 | 11 | 800 |

9046

| Solution | | |
|----------|-----|-----|
| MDT | EDT | RVT |
| 1 | 19 | 500 |

Figure 24D

9044

| Data | | |
|------|-----|-----|
| MDT | EDT | RVT |

9046

| Solution | | |
|----------|-----|-----|
| MDT | EDT | RVT |
| 1 | 19 | 500 |
| 2 | 11 | 700 |

Figure 24E

9046

| Solution | | |
|----------|-----|-----|
| MDT | EDT | RVT |
| 1 | 19 | 500 |
| 2 | 11 | 700 |

Figure 24F

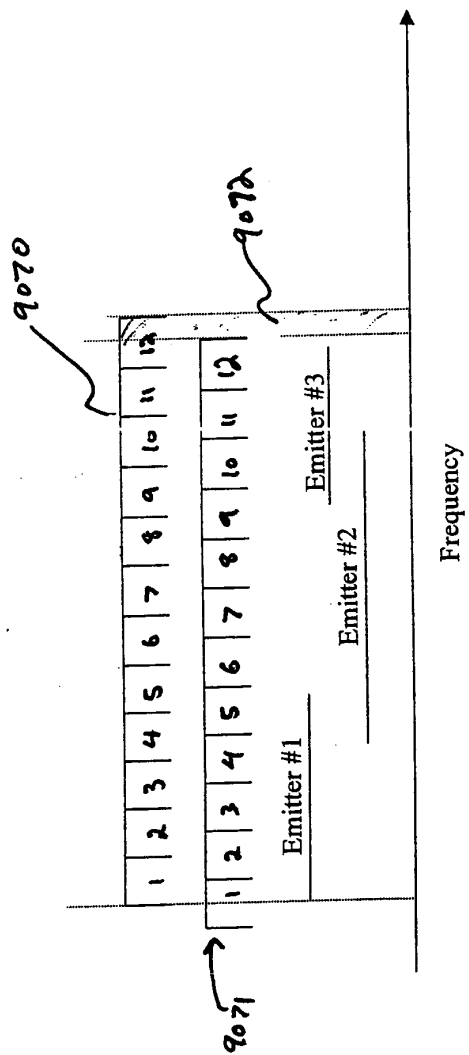


Figure 25

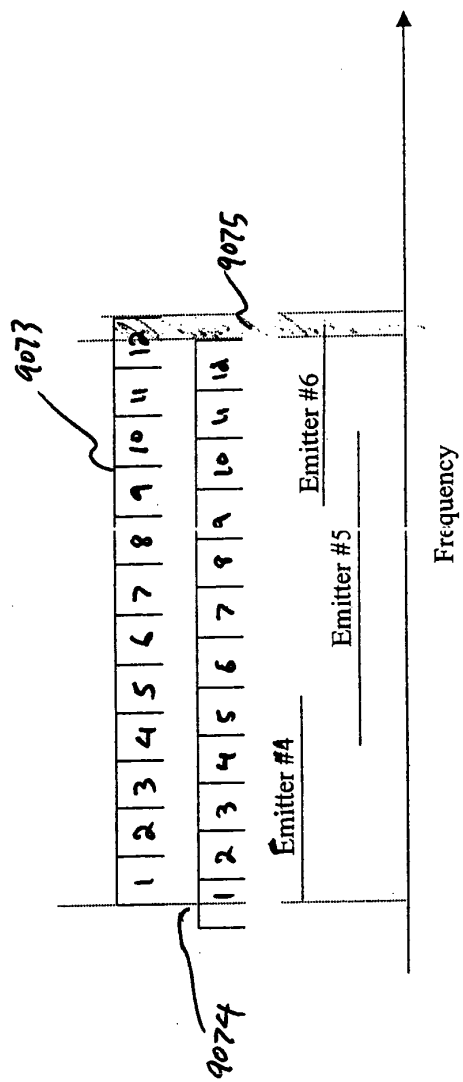


Figure 26

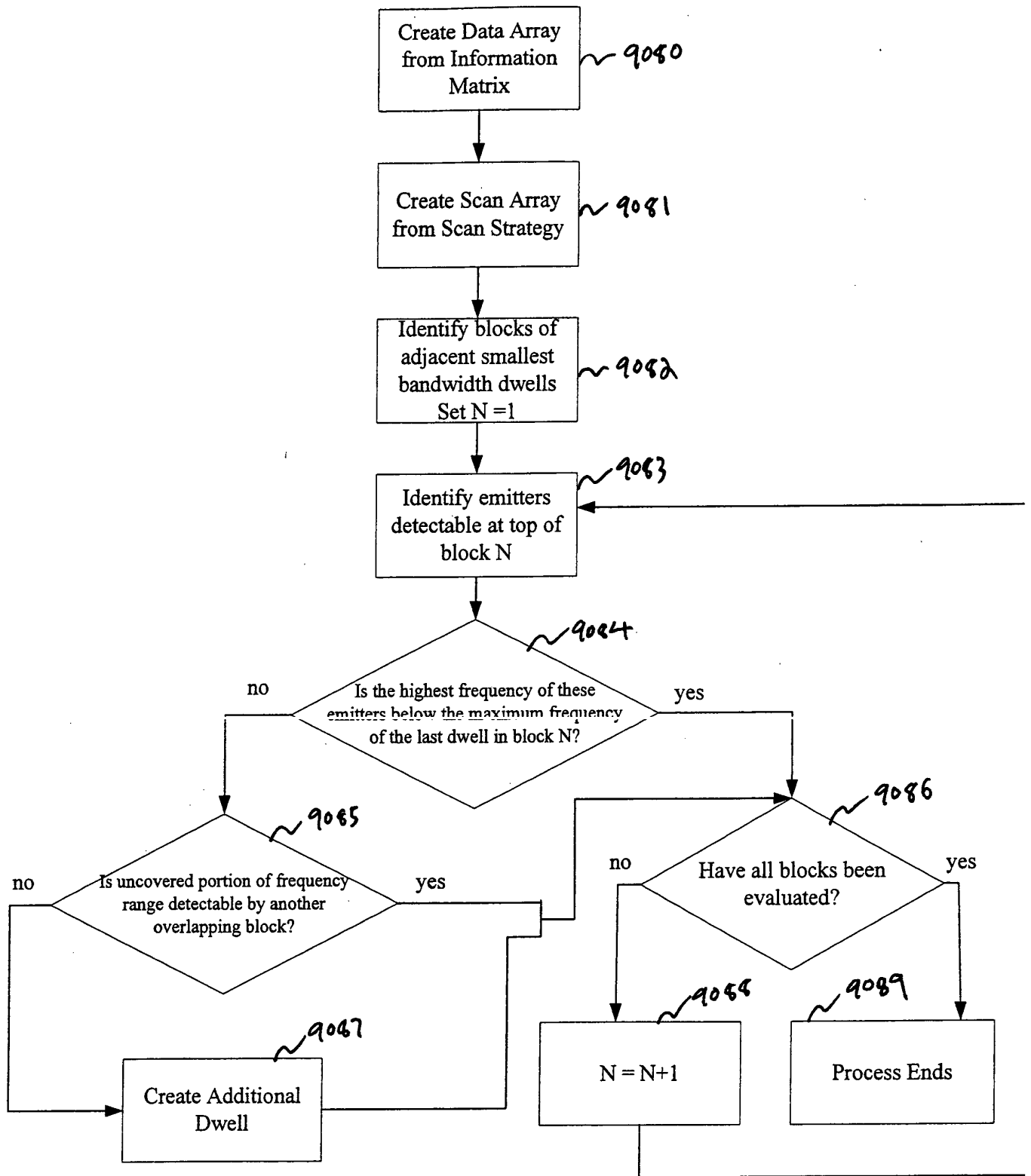


Figure 27

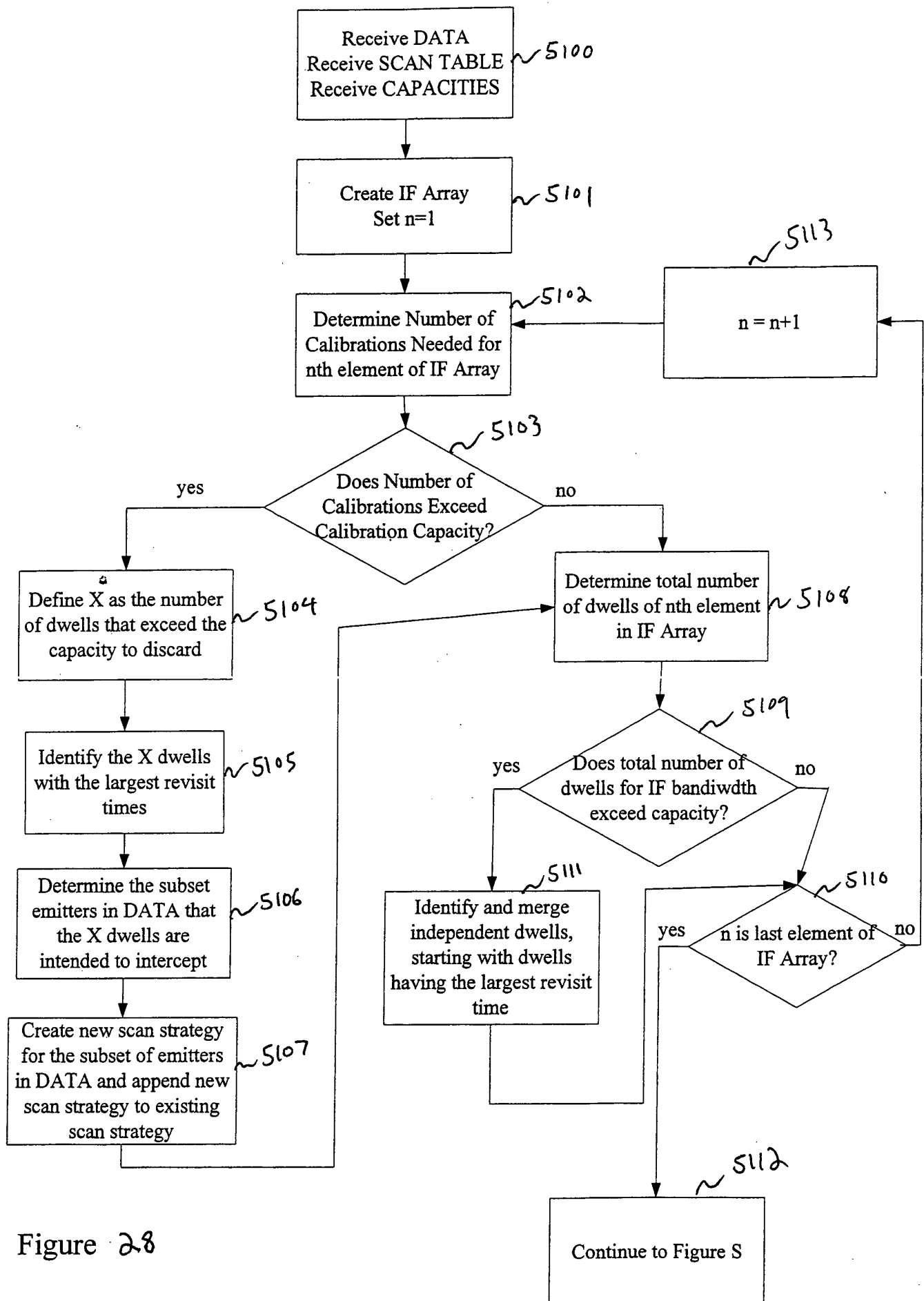


Figure 28

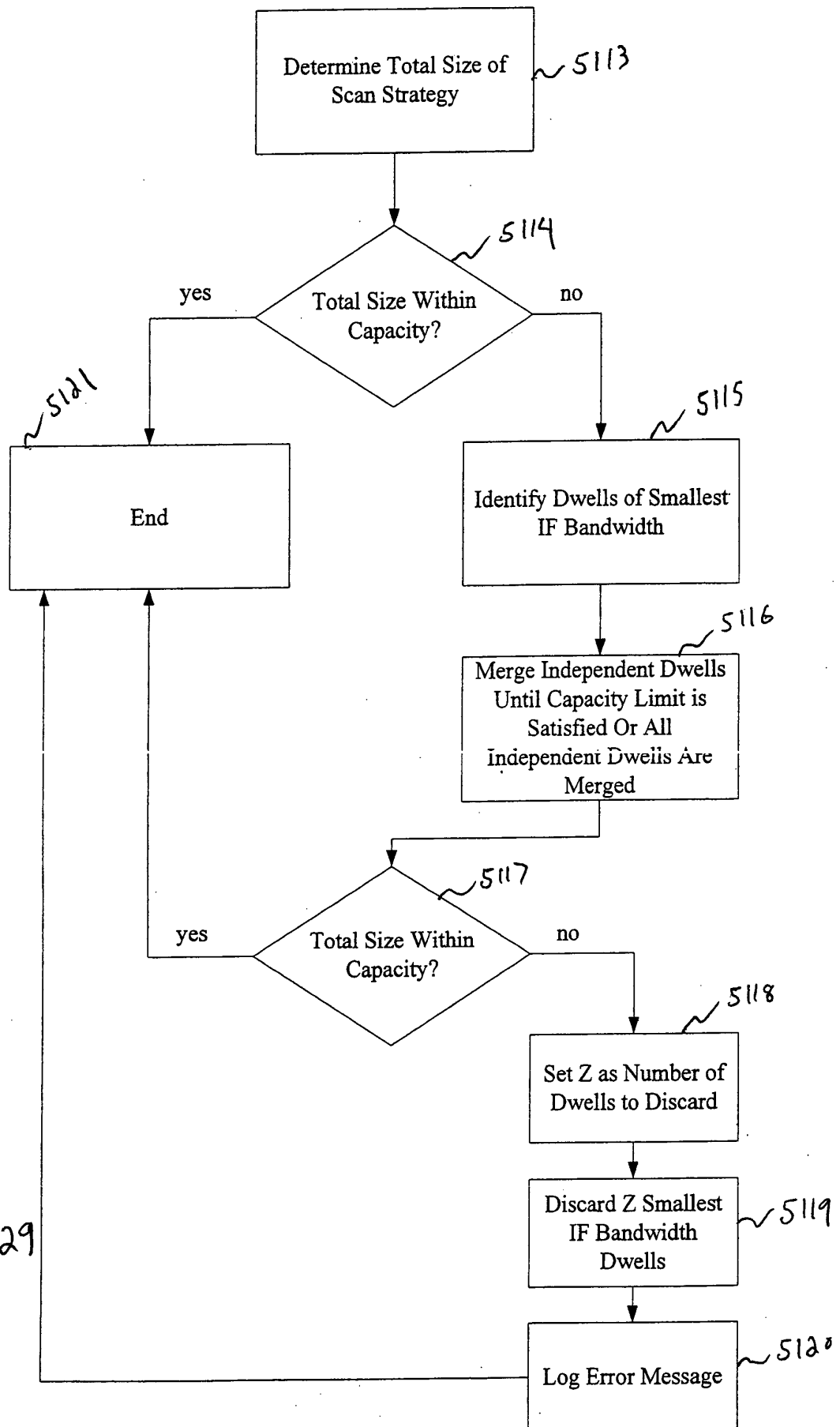


Figure 29

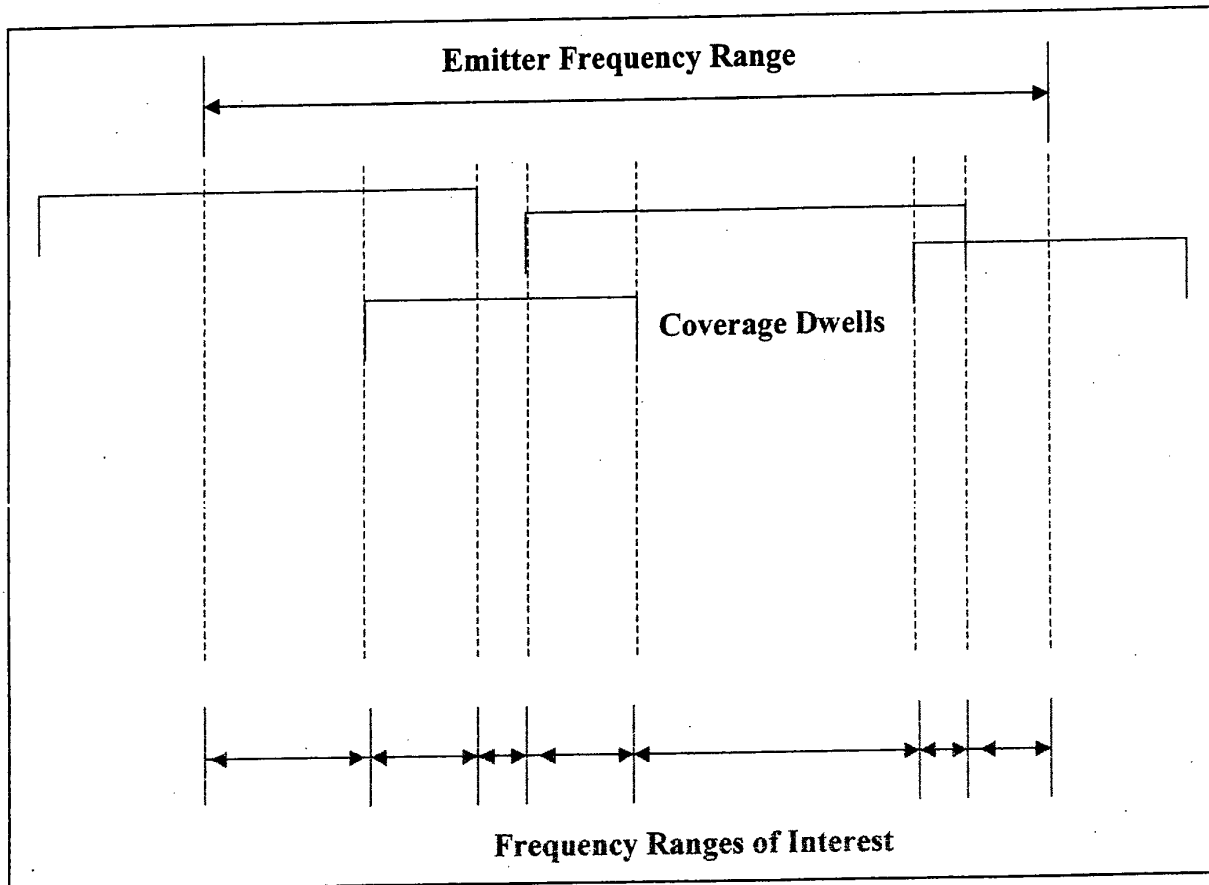


Figure 30

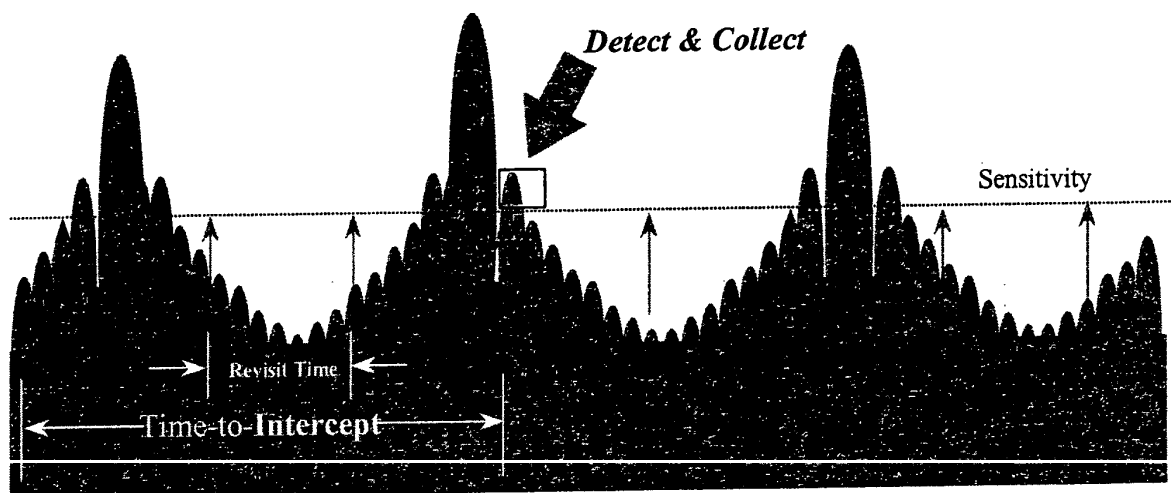


Figure 31

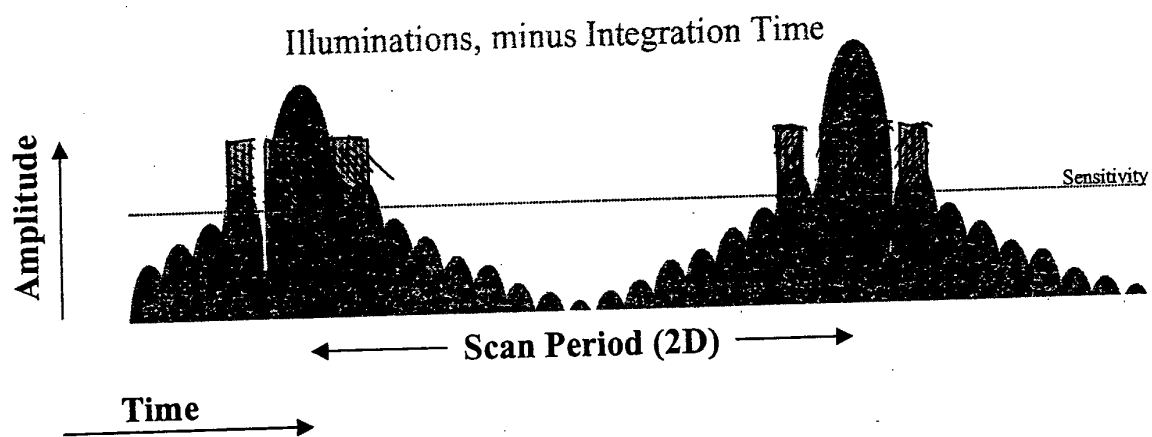


Figure 3d